

## CLAIMS

1. A method of loading at least one file ( $F_i$ ) or a part ("clip") ( $C_i$ ) thereof from a unit (FU) comprising files ( $F_i$ ) or clips ( $C_i$ ) thereof over an interface (IF) to a data-processing unit (DU), the method comprising  
5 determining joint probabilities ( $JP_i$ ) of at least two files ( $F_i$ ) or clips ( $C_i$ ) thereof, which joint probabilities express probabilities with which one moves to said files ( $F_i$ ) or clips ( $C_i$ ) thereof,

**characterized by**

10 determining energy consumptions ( $W_i$ ) caused by the loading of said at least two files ( $F_i$ ) or clips ( $C_i$ ) thereof over the interface (IF);

forming a loading order for said files ( $F_i$ ) or clips ( $C_i$ ) thereof as a function of said joint probabilities ( $JP_i$ );

15 determining a value for maximum energy consumption ( $EC_{MAX}$ ), the value expressing the greatest allowed energy consumption caused by said loading;

loading files ( $F_i$ ) or clips ( $C_i$ ) thereof in said loading order and determining total energy consumption ( $\Sigma W_i$ ) caused by the loading until the value of said total energy consumption ( $\Sigma W_i$ ) exceeds the value of the maximum energy consumption ( $EC_{MAX}$ ).

20 2. A method according to claim 1,

**characterized by**

determining loading probabilities ( $LP_i$ ) of said files ( $F_i$ ) or clips ( $C_i$ ) thereof as a function of said joint probabilities ( $JP_i$ ).

3. A method according to claim 2,

**characterized by**

determining loading probability functions ( $fLP_i$ ) of said files ( $F_i$ ) or clips thereof as a function of the loading probabilities ( $LP_i$ ).

4. A method according to claim 2,

**characterized by**

30 determining loading probability functions ( $fLP_i$ ) of said files ( $F_i$ ) or clips ( $C_i$ ) thereof as a function of the loading probabilities ( $LP_i$ ) and the energy consumptions ( $W_i$ ) caused by the loading.

5. A method according to any one of the preceding claims,

**characterized by**

redetermining the value of said energy consumptions ( $W_i$ ), maximum energy consumption ( $EC_{MAX}$ ) and joint probabilities ( $JP_i$ ) periodically.

6. A method according to any one of the preceding claims,

**characterized by**

5 redetermining the values of said maximum energy consumption ( $EC_{MAX}$ ) according to the interface (IF) in question.

7. A method according to claim 5 or 6,

**characterized by**

10 updating the values of said loading probabilities ( $LP_i$ ) and loading probability functions ( $fLP_i$ ) as a response to said determination.

8. A method according to any one of the preceding claims,

**characterized by**

15 loading at least one file ( $F_i$ ) or a clip ( $C_i$ ) thereof over said interface (IF) alternatively from a server (S) to a terminal (T) or from a first memory component (100) to a second memory component (102).

9. A method according to any one of the preceding claims,

**characterized by**

20 loading at least one file ( $F_i$ ) or a clip ( $C_i$ ) thereof over said interface (IF) alternatively from a first terminal ( $T_1$ ) to a second terminal ( $T_2$ ) over a local network interface (LIF).

10. A method according to any one of the preceding claims,

**characterized by**

25 loading at least one file ( $F_i$ ) or a clip ( $C_i$ ) thereof from a mass memory component (830) to another memory component (836) over an internal interface.

30 11. A method of loading at least one file ( $F_i$ ) or a clip ( $C_i$ ) thereof from a unit (FU) comprising files ( $F_i$ ) or clips ( $C_i$ ) thereof over an interface (IF) to a data-processing unit (DU), the method comprising determining joint probabilities ( $JP_i$ ) of at least two files ( $F_i$ ) or clips ( $C_i$ ) thereof, which joint probabilities express probabilities with which one moves to said files ( $F_i$ ) or clips ( $C_i$ ) thereof,

**characterized by**

35 forming a loading order for said files ( $F_i$ ) or clips ( $C_i$ ) thereof as a function of said joint probabilities ( $JP_i$ );

determining a threshold value (TH), which expresses a value, which the value determined as a function of the joint probability of the file ( $F_i$ ) or a clip

(C<sub>i</sub>) thereof must at least reach in order for the file (F<sub>i</sub>) or a clip (C<sub>i</sub>) thereof to be loaded;

loading files (F<sub>i</sub>) or clips (C<sub>i</sub>) thereof in said loading order and comparing the values determined as functions of the joint probabilities of the  
 5 files (F<sub>i</sub>) or clips (C<sub>i</sub>) thereof with the threshold value (TH) until the value determined as the function of the joint probability (JP<sub>i</sub>) of the file (F<sub>i</sub>) or a clip (C<sub>i</sub>) thereof is smaller than the threshold value (TH).

12. A system for loading at least one file (F<sub>i</sub>) or a clip (C<sub>i</sub>) thereof from a unit (FU) comprising files (F<sub>i</sub>) or clips (C<sub>i</sub>) thereof over an interface (IF)  
 10 to a data-processing unit (DU), the system comprising means for determining joint probabilities (JP<sub>i</sub>) of at least two files (F<sub>i</sub>) or clips (C<sub>i</sub>) thereof, which joint probabilities express probabilities with which one moves to said files (F<sub>i</sub>) or clips thereof (C<sub>i</sub>),

**characterized in that** the system comprises

15 means for determining the energy consumption (W<sub>i</sub>) caused by the loading of said at least two files (F<sub>i</sub>) or clips (C<sub>i</sub>) thereof;

means for determining the loading order of said files (F<sub>i</sub>) or clips (C<sub>i</sub>) thereof as a function of said joint probabilities (JP<sub>i</sub>);

20 means for determining the value of maximum energy consumption (EC<sub>MAX</sub>), which expresses the greatest allowed energy consumption caused by said loading; and

25 means for loading files (F<sub>i</sub>) or clips (C<sub>i</sub>) thereof and determining the total energy consumption ( $\Sigma W_i$ ) caused by the loading of the files (F<sub>i</sub>) or clips (C<sub>i</sub>) thereof, the means being arranged to load files (F<sub>i</sub>) or clips (C<sub>i</sub>) thereof until the value of the total energy consumption ( $\Sigma W_i$ ) exceeds the value of the maximum energy consumption (EC<sub>MAX</sub>).

13. A system according to claim 12,

**characterized in that**

30 at least part of said means is executed as a program code of a driver (DR) comprised by the system.

14. A device for loading at least one file (F<sub>i</sub>) or a clip (C<sub>i</sub>) thereof from a unit (FU) comprising files (F<sub>i</sub>) or clips (C<sub>i</sub>) thereof over an interface (IF), the device comprising means for determining joint probabilities (JP<sub>i</sub>) of at least two files (F<sub>i</sub>) or clips (C<sub>i</sub>) thereof, which joint probabilities express probabilities with which one moves to said files (F<sub>i</sub>) or clips (C<sub>i</sub>) thereof,  
 35

**characterized in that** the device comprises

means for determining the energy consumptions ( $W_i$ ) caused by the loading of said at least two files ( $F_i$ ) or clips ( $C_i$ ) thereof;

means for determining the loading order of said files ( $F_i$ ) or clips ( $C_i$ ) thereof as a function of said joint probabilities ( $JP_i$ );

5 means for determining the value of maximum energy consumption ( $EC_{MAX}$ ), which expresses the greatest allowed energy consumption caused by said loading; and

means for requesting files ( $F_i$ ) or clips ( $C_i$ ) thereof and determining the total energy consumption ( $\Sigma W_i$ ) caused by the loading, the means being

10 arranged to load files ( $F_i$ ) or clips ( $C_i$ ) thereof until the value of said total energy consumption ( $\Sigma W_i$ ) exceeds the value of the maximum energy consumption ( $EC_{MAX}$ ).

15 15. A device for forming the loading order of at least two files ( $F_i$ ) or clips ( $C_i$ ) thereof for loading functionality performed over an interface (IF),

15 characterized in that the device comprises:

means for determining the energy consumption ( $W_i$ ) caused by the loading of said at least two files ( $F_i$ ) or clips ( $C_i$ ) thereof, and

means for determining the loading order of said files ( $F_i$ ) or clips ( $C_i$ ) thereof as a function of said joint probabilities ( $JP_i$ ).

20 16. A device for controlling the loading of at least two files ( $F_i$ ) or clips ( $C_i$ ) thereof performed over an interface (IF),

characterized in that the device comprises:

means for determining the value of maximum energy consumption ( $EC_{MAX}$ ), which expresses the greatest allowed energy consumption caused by

25 said loading, and for determining the total energy consumptions ( $\Sigma W_i$ ) caused by the loading of said files ( $F_i$ ) or clips ( $C_i$ ) thereof until the value of said total energy consumption ( $\Sigma W_i$ ) exceeds the value of the maximum energy consumption ( $EC_{MAX}$ ).

30 17. A device according to any of claims 14 – 16,

characterized in that the device comprises:

proxy functionality, which is arranged to transmit at least one file ( $F_i$ ) or a clip ( $C_i$ ) thereof to another data-processing unit (DU) as a response to a request from the data-processing unit (DU).

35 18. A software product for loading at least one file ( $F_i$ ) or a clip ( $C_i$ ) thereof from a unit (FU) comprising files ( $F_i$ ) or clips ( $C_i$ ) thereof over an interface (IF) to a data-processing unit (DU), the software product comprising a

software code for determining joint probabilities ( $JP_i$ ) of at least two files ( $F_i$ ) or clips ( $C_i$ ) thereof, with which probabilities one moves to said files ( $F_i$ ) or clips ( $C_i$ ) thereof,

**characterized** in that said software product comprises:

- 5 a software code for determining the energy consumptions ( $W_i$ ) caused by said at least two files ( $F_i$ ) or clips ( $C_i$ ) thereof,
- 10 a software code for forming the loading order of said files ( $F_i$ ) or clips ( $C_i$ ) thereof as a function of said joint probabilities ( $JP_i$ );
- 15 a software code for determining the value of the maximum energy consumption ( $EC_{MAX}$ ), which expresses the greatest allowed energy consumption caused by said loading; and

a software code for loading files ( $F_i$ ) or clips ( $C_i$ ) thereof and determining the total energy consumption ( $\Sigma W_i$ ) caused by the loading of said files ( $F_i$ ) or clips ( $C_i$ ) thereof until the value of said total energy consumption ( $\Sigma W_i$ ) exceeds the value of the maximum energy consumption ( $EC_{MAX}$ ).

19. A software product for forming the loading order of at least two files ( $F_i$ ) or clips ( $C_i$ ) thereof for loading functionality to be performed over an interface (IF),

**characterized** in that said software product comprises:

- 20 a software code for determining the energy consumptions ( $W_i$ ) of said at least two files ( $F_i$ ) or clips ( $C_i$ ) thereof; and
- 25 a software code for forming the loading order of said files ( $F_i$ ) or clips ( $C_i$ ) thereof as a function of said joint probabilities ( $JP_i$ ).

20. A software product for controlling the loading of at least two files ( $F_i$ ) or clips ( $C_i$ ) thereof to be performed over an interface (IF),

**characterized** in that the software product comprises:

- 25 a software code for determining the value of the maximum energy consumption ( $EC_{MAX}$ ), which expresses the greatest allowed energy consumption caused by said loading; and
- 30 a software code for loading files ( $F_i$ ) or clips ( $C_i$ ) thereof and determining the total energy consumption ( $\Sigma W_i$ ) caused by the loading of said files ( $F_i$ ) or clips ( $C_i$ ) thereof until the value of said total energy consumption ( $\Sigma W_i$ ) exceeds the value of the maximum energy consumption ( $EC_{MAX}$ ).